**K-5 Math Lesson Plan**

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| **Teacher: Sciandra** | | | **Grade: 5** | | | **Date(s)**: September, 2012 (1 day) |
| **Unit Title:** Unit 1 – Understand the Decimal Place Value System | | | | **Corresponding Unit Task:**  Taught prior to Performance Task 4. This lesson will mainly focus on comparing decimals to thousandths. | | |
| **Essential Question(s):** How does a digit’s position affect its value?How do you read and write to decimals through thousandths? How can you use place value to compare and order decimals? | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**   * Construction paper “shoes” * Number line 0-2 * Number cards * Grid paper * >, <, = cards * Super Source CD | | **Student:**   * “Shoe” * Number line 0-2 * Number cards * Grid paper * Crayons / pencil * Base 10 blocks | | | tenths, hundredths, thousandths, less than, greater than, equal to  inequality, standard form (number form), expanded form, number line, | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  Number and Operations in Base Ten  5.NBT: Understand the place value system.  5.NBT.3: Read, write, and compare decimals to thousandths.  5.NBT.3: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).  **5.NBT.3b: Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.** | | | | | |
| **I Can Statement(s):**  1. I can use the symbols =, < and > when comparing numbers.  2. I can compare two decimals to thousandths using less than, greater than, and equal. | | | | | |
| **Activating Strategy/Hook:** (How will students become cognitively engaged and focused?)  Where's My Other Shoe?  Before the game, the teacher cuts out pairs of shoes on construction paper using the students' shoes as a guide. Using different colors, trace and cut out shoes so each shoe has one matching shoe to make a pair. Write a number in standard form on one shoe and the correct expanded form on the other. To play, give each student a shoe and send her around the room to find the match. When she finds the other shoe partner, she sits down. When all students have found their partners, have students share their number pairs in standard and expanded n. To make this game more challenging, do not use different colored paper. Students will have to find their matches without the visual color clue. | | | | | |
| **Teacher Directed:**   * Ordering Numbers Activity: Task – Place a number line in front of you. Take each numeral card and place it on the number line. Draw the number line and write the numbers in order. Materials: Numeral Cards - 0.05; 0.10; 0.65; 0.75; 0.95; 1.30; 1.50; 1.75 Number line from 0 to 2. * Students will use grid paper to model a teacher generated decimal. Then they will pair share to explain their model to their partner. The students will then make a comparison of their two decimal models and write an inequality. | | | | | |
| **Guided Practice:**  Have groups of students produce a number line with a given set of decimal number cards. Then have students to take the cards that they have produced and compare them using greater than, less than, and equal to signs. Example: 0.5, 1.25, .307, .55, .75, .001, 1.6, .05, .05  Find four numbers that are between 0.11 and 0.12 and put all six numbers from least to greatest.  Comparing Decimals Activity (attached)  Dice Game Activity (attached) | | | | | |
| **Independent Practice:**  Super Source: “Decimal Mirrors”, pg. 34-37  Super Source: “What’s 1?” pg. 86-90 Use “Extending the Activity” on page 88 for a follow-up on ordering decimals. Give students real world problems for ordering and comparing decimals. For example, Shontel and Ellen were in a running race. Shontel finished the race in 2.45 minutes. Ellen finished in 2.36 minutes. Write an inequality comparing Shontel’s time to Ellen’s time. Justify who would be the winner of the race.  Or other teacher created activity.  EnVisions 1-4 | | | | | |
| **Closing/Summarizing Strategy:**  Using the standard notation “Shoe” from the activating strategy, pass out two “shoes” to each small group and have them compare the two numbers. Groups can share their results with the class by explaining how they arrived at their answer.  Reflect on the “I can” statements from the beginning of the lesson. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| Use past data for your favorite baseball team; order the batting averages of the players. Sample problem: At the end of the baseball season the top three hitters were Ethan, Maggie and John. Ethan’s batting average was 0.282, Maggie’s batting average was 0.223, and John’s batting average was 0.272. Write the batting averages in the order from the highest to the lowest. (Teacher should feel free to change numbers).  Student develops a product of choice to compare winning times of different sports and draws conclusions about the times. | | | Using advertisements, menus, and other everyday documents the student will choose two numbers; write them in expanded form and make a comparison (>, <, =) of the numbers.  Student compares numbers one digit at a time.  Student uses audio recording of the sections that the student needs to read.  Use unit cubes to represent each number. | | | * Use place value poster to compare decimals (attached) * Review mathematical symbols and terms: less than; greater than; equal to * Abbreviated form of task provided after the original task if needed.   **Writing to Learn:** After key point in the unit (task), have students write in their journal using the following sequence:   * *Record*: State what they have learned. * *Compare*: Students pair up and compare what they have written and clarify. * *Revise*: Based on the interaction, students create a more developed and polished version of their statements. * *Combine*: Students collaborate to mesh their summaries. * *Review*: Students use previous entries to prepare and guide them through subsequent tasks. |
| **Assessment(s):**  Reflect upon the ordering numbers activity in guided practice.  Teacher can collect the super source activity sheet (or other independent practice activity) from each student. | | | | | | |
| **Teacher Reflection:** (Next steps?)   * What went well? * Student understanding/misconceptions * Specific notes about students’ thinking * What do I need to reteach/review tomorrow or in the future? * New ideas or changes for next time   SMART BOARD - Ordering Decimals  <http://exchange.smarttech.com/details.html?id=619592eb-9ffc-447c-86a8-55a6739c1167>  This leasson reviews the concept of decimal value and ordering decimals from least to greatest. The lesson includes two practice pages and two activities. | | | | | | |